

REVISED STATUS OF THE GENUS *HETAERICA* RAINBOW (ARANEAE:  
ZODARIIDAE)

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Adult male and female material of *Hetaerica aresca* Rainbow, 1916 from the type locality, Pentlands, NE Queensland, is described and found to be conspecific with the type species of *Australorena* Jocqué, 1995, previously described as *Habronestes scenicus* Koch, 1872. The new combination, *Hetaerica scenica* (Koch, 1872), is established and the male palp and female epigyne are redescribed. A new species *H. harveyi* is described from Western Australia. □ *Taxonomy, Zodariidae, Hetaerica, envenomation, Australia.*

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Rainbow (1916) described a new zodariid genus, *Hetaerica*, from Pentlands, north Queensland. The type material of the type species, *Hetaerica aresca* Rainbow, 1916, was juvenile, hence Jocqué (1991, 1995) was unable to resolve its affinities. No further collections had since been made from the type locality. However, Jocqué (1995) did note, in his description of the new genus *Australorena*, that 'The type species of this new genus has several somatic features in common with *Hetaerica aresca*, the only species of *Hetaerica*, known only from a juvenile specimen'. On three occasions, one author (RJR) attempted to collect adult material from Pentlands and was only successful on the final attempt. That material is here described and is unequivocally conspecific with that of *Australorena scenica* (Koch, 1872), revised by Jocqué (1995).

SYSTEMATICS

***Hetaerica* Rainbow, 1916**

*Hetaerica* Rainbow, 1916: 48. Type species by monotypy, *Hetaerica aresca* Rainbow, 1916.

*Australorena* Jocqué, 1995: 126. Type species by original designation *Habronestes scenicus* Koch, 1872. (New synonymy)

DIAGNOSIS. As for *Australorena* Jocqué, 1995 plus the apical conductor is a folded, sclerotised cone.

DESCRIPTION (supplementary to Jocqué, 1995). 10-II teeth on paired claws; teeth long and set on inner edge distally (Fig. 5C). Unpaired claw long, straight. Tarsal organ set centrodorsally on distal edge of tarsus cuticle. Tarsal cuticle smooth save for light irregularly placed fine grooves. Tarsus predistally intact. Bothrial

cup collariform; trichae long and smooth for basal half becoming finely fimbriate distally; trichobothria present on mesal setose process of tibial apophysis. Tibial apophysis tripartite with distal bifurcate lobe, mesal hirsute extension of tibia and asetose basal prong. Female epigyne with unsclerotised zones laterally.

SPECIES INCLUDED. *Hetaerica scenica* (Koch, 1872); *Hetaerica harveyi* sp. nov.

REMARKS. We note that the palp of *Hetaerica* and an undescribed species of *Chilumena* are similar in the male, but that the latter has a distinct sclerotised, hooked tegular apophysis (?median apophysis) and lacks the prolateral cymbial groove and associated flange. *Hetaerica* has a rough carapace cuticle but in *Chilumena* the surface is deeply rugose or corrugated and this remains the most distinct feature of the genus (Jocqué, 1995). Because of these similarities we regard the two as sister genera and await the description of further species of both to determine whether the cuticular difference is sound.

The tibial apophysis of *Hetaerica* presents an unusual character not before noted. The mesal lobe has at least two trichobothria apically on it (Fig. 2B) and is strictly speaking only an extension of the tibia; tibial apophyses do not usually have trichobothria in spiders. This raises a question about homologising the lobes of the retrolateral tibial apophysis (RTA).

***Hetaerica scenica* (Koch, 1872), comb. nov.**  
(Figs 1-4)

*Habronestes scenicus* Koch, 1872: 301, 316.

*Storena scenica* Simon, 1893: 427; Rainbow, 1911: 151; Davies, 1985: 121.

*Hetaerica aresca* Rainbow, 1916: 48, figs 21-23; Jocqué, 1991: 59, figs. 113-116. (New synonymy)

**MATERIAL.** *Hetaerica arcsca*: Holotype: AMKS6744, juv., Pentlands, NE Qld, A Girault; QMS42917, ♂, ♀, Pentlands, 20°26'S 145°32'E, NE Qld, 9 Mar 1999, B. Baehr, R. Raven; QMS4354, ♂, ♀, Bluff Downs, 60m NW Charters Towers, 19°40'S 145°32'E, NE Qld, 19 Apr 1974, M. Archer, A. Elliot; QMS22751, ♂, 2♀, Cape Cleveland Rd, 19°20'S 147°00'E, ME Qld, pitfall, 25 Oct 1991-27 Jul 1992, R. Raven, P. Lawless, M. Shaw; QMS22752, ♂, same data; QMS22915, ♂, 3 juv., Eight Mile Ck, 18°40'S 144°42'E, NE Qld, dry eucalypt forest, pitfall, 1 Dec 1992-14 Apr 1993, R., J. & S. Raven, P. & E. Lawless; QMS4487, 7♂, 3♀, 5 juv., Forty Mile Scrub, 18°04'S 144°50'E, NE Qld, vine thicket, 10-14 Apr 1978, V. Davies, R. Raven; QMS25711, 3♂, 4 juv., same locality, 1 Dec 1992-15 Apr 1993, P. Lawless, M. Shaw, R., J. & S. Raven; QMS41772, ♂, 1 juv., Fraser I, Orchid Beach (F04), 24°57'S 153°18'E, SE Qld, heathland, pitfall, 20 Aug 1997-17 Dec 1997, R. Raven, P. Lawless; QMS3681, 3♂, 1 juv., Homevale, 21°23'S 148°33'E, ME Qld, sclerophyll by creek, 6 Apr 1975, R. Kohout; QMS19703, ♂, Karalee, 27°34'S 152°49'E, SE Qld, spider bite, 10 Mar 1993, A.J. Tuskes; QMS37730, ♀, Keysland, 26°12'S 151°44'E, SE Qld, open forest, pitfall, 29 Sep 1994-15 Dec 1994, G. Monteith; QMS27987, ♂, Kinuna NP, 21 Apr 1992, M. Shaw; QMS15727, ♀, Lake Broadwater, Site 3, 27°20'S 151°05'E, SE Qld, pitfall, 3 Jan-25 Feb 1986, Qld Museum party & M. Bennie; QMS15735, 5♂, 5♀, Lake Broadwater, Site 8, 27°20'S 151°05'E, SE Qld, pitfall, 25 Feb-22 Apr 1986, Qld Museum party & M. Bennie; QMS26162, ♂, Magnetic I, 19°07'S 146°50'E, NE Qld, spider bite, 9 Mar 1995, per Sr. Deborah Larter; QMS30720: ♂, Mulgowie, Laidley Valley, 27°44'S 152°22'E, SE Qld, eucalypt woodland, pitfall, 21 Jan-1 Feb 1981, M. Grant; QMS30722, ♂, Rochedale SF, 27°37'S 153°08'E, SE Qld, pitfall, 20 Dec 1979-17 Jan 1980, V. Davies, R. Raven; QMS30721, 2♂, same locality, 24 Apr-12 Jun 1980, V. Davies, R. Raven; QMS21911, ♂, S. Rifle Range Rd, N. Ellis Beach (N Qld 14), 16°40'S 145°34'E, NE Qld, pitfall, 1 Nov 1991-22 Jul 1992, P. Lawless, R. Raven, M. Shaw; QMS41920, ♂, p♂, Saunders Beach, 19°10'S 146°36'E, NE Qld, open forest, pitfall, 04-12 Feb 1998, G. Monteith, D. Cook; QMS27500, 2♀, South Percy I, NW Bay, 21°45'S 150°17'E, ME Qld, intercept flight trap, 26 Nov 1992-mid Apr 93, G. Monteith, G. Thompson, D. Cook, H. Janetzki; QMS24503, ♂, Tooloombah Ck, (NQ 41), 22°42'S 149°33'E, ME Qld, eucalypt woodland, pitfall, 29 Jul 1992-24 Nov 1992, R. Raven, P. & E. Lawless, M. Shaw; QMS24081, ♂, same locality, pitfall, 10 Nov 1991-29 Jul 1992, R. Raven, P. Lawless, M. Shaw.

**DIAGNOSIS.** This species is recognised by the divided chilum, the long fang of the chelicerae, the promargin with one small tooth, the abdominal pattern with elongate dorsal scutum, two elongate pale patches on anterior half and one in front of the spinnerets, the palpal structure. Only one tegular apophysis (DTA) = suprategular apophysis (Jocqué 1991), is the conductor of the embolus, directed in embolus direction. The palp

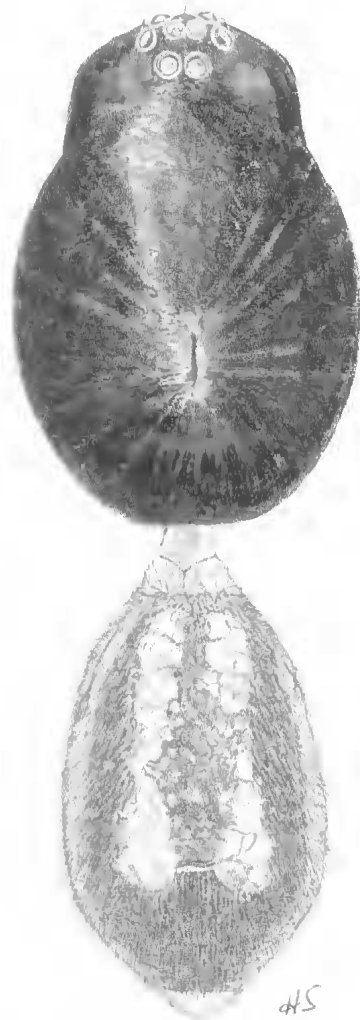


FIG. 1. *Hetaerica scenica* (Koch), male, habitus, dorsal view.

of *H. scenica* differs from that of *H. harveyi* sp. nov. in the acute tegular process.

**DESCRIPTION.** *Male.* NT (QMS42917): Measurements (mm). Total length 6.1. Cephalothorax 3.3 long, 2.26 wide. Abdomen 2.8 long, 1.8 wide. Sternum 1.46 long, 1.13 wide. Legs I 7.8, II 6.93, III 6.8, IV 9.3. Eye sizes and distances between them: AME 0.1, ALE 0.16, PME 0.16, PLE 0.18, AME-AME 0.03, AME-ALE 0.05, PME-PME 0.06, PME-PLE 0.13, ALE-PLE 0.01; median ocular quadrangle 0.38 long, 0.23 wide at front, 0.36 wide at back. Clypeus 0.43 high. Chilum 2 × 0.41 long. Chelicera fang 0.91 long.

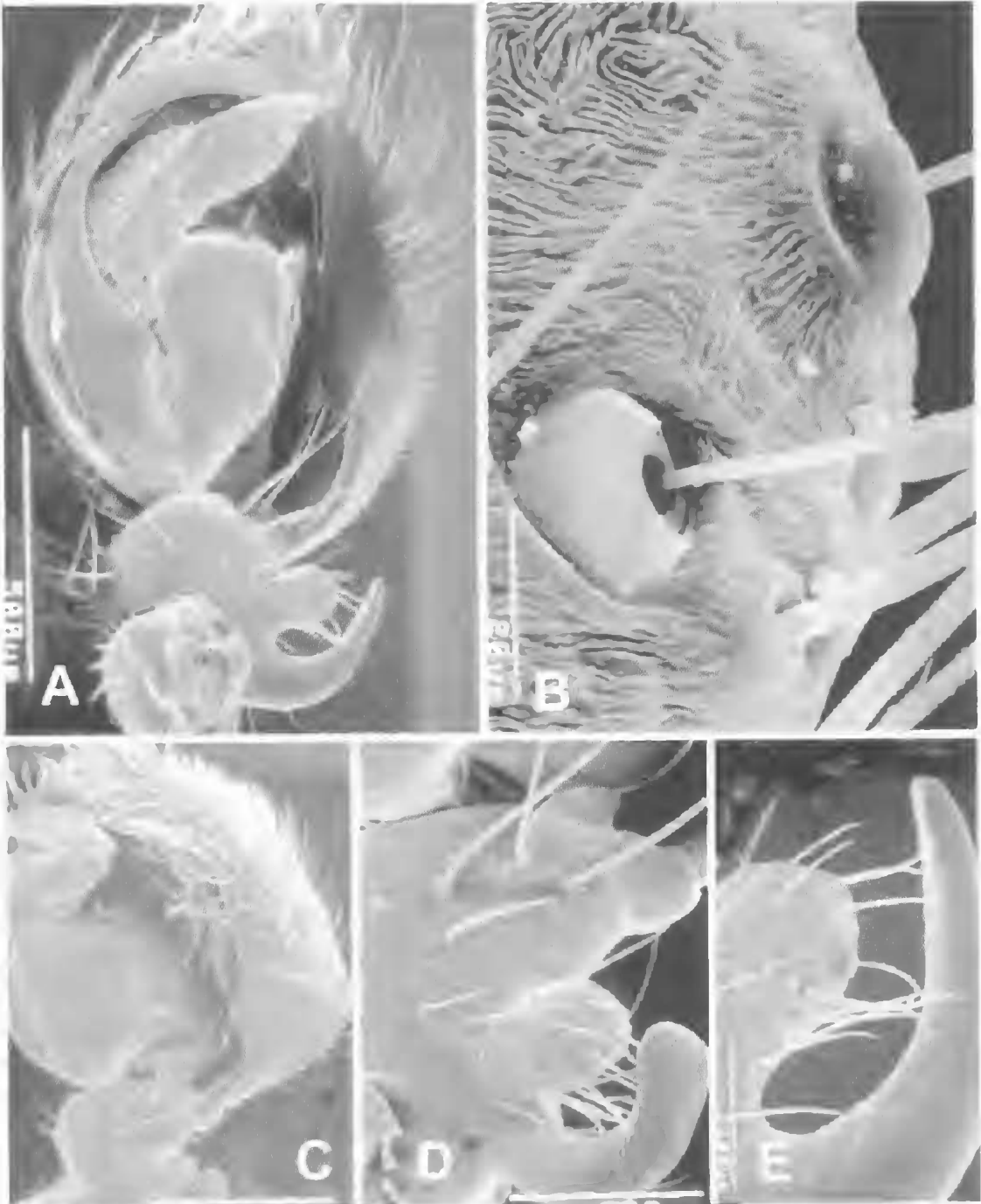


FIG. 2. *Hetaerica scenica* (Koch), male pedipalp, tibia, cymbium and bulb, dorsal left, scanning electron micrograph. A, ventral view; B, trichobotria on tibial apophysis; C, lateral view showing paracymbial flange and tibial apophysis; D, tibial apophysis, retroventral, and E, ventral view.

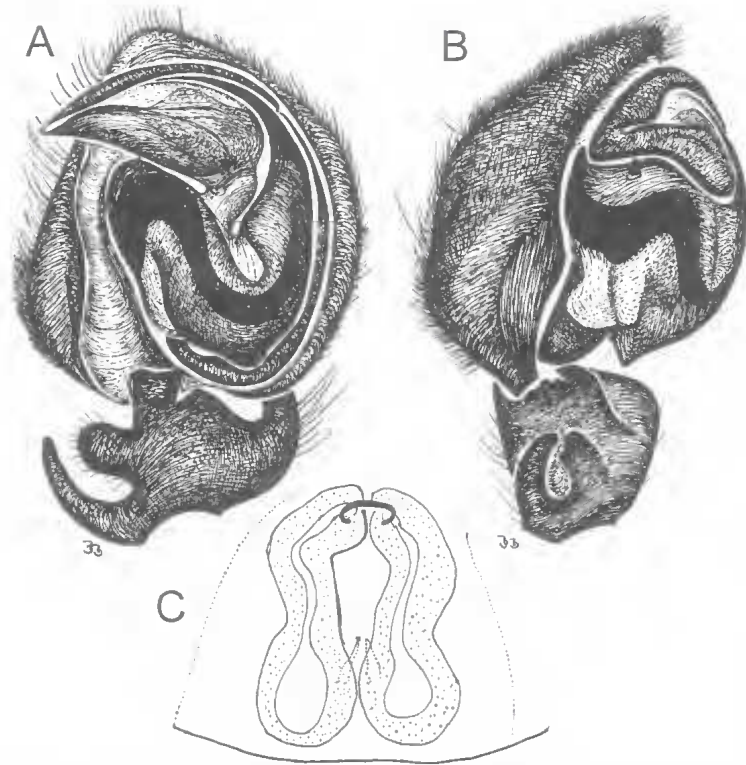


FIG. 3. *Hetaerica scenica* (Koch). A, B, male pedipalp, tibia, cymbium and bulb, dorsal right, A, ventral view, B, retrolateral view. C, female, external epigyne, cleared showing spermathecae.

**Colour and Structure.** Cephalothorax, granulated, dark brown, with rebordered margins. Chelicerae short, dark brown, promargin with single small tooth. Maxillae brown, anteromesally pale, strongly tapering, curved inward, with small anteromesal scopula. Sternum reddish brown, basically triangular, with rounded sides; provided with triangular 8 extensions, each side, corresponding with coxal concavities, pointed behind. Abdomen dark brown with 2 elongate pale spots on anterior half, reddish brown scutum in between, one pale spot in front of the spinnerets. Spinnerets dark brown; venter dark brown with 3 elongate pale spots, booklung covers and epigastric area with weak reddish brown scutum. Legs: all legs dark brown, tarsi slightly paler. Palp: tibia with one elongate ventral rounded dorsal apophysis and two apophyses in front. Cymbium as wide as long, retrolaterally widened, with short flange and shallow concavity. Bulb with one retrolateral directed enrolled distal tegular apophysis, functioning as conductor in same direction as the embolus and one tiny lateral tegular spine.

**DESCRIPTION. Female.** Carapace brown, legs green brown; abdomen dorsally dark brown with pair of irregular clear zones showing white gut, zones anteriorly narrow reniform narrowing posteriorly and widening to two large spots centrally; a pallid spot above spinnerets, ventrally brown with three short longitudinal bands. Sternum redbrown.

**Carapace.** With uniformly distributed pallid setal bases bearing short, fine black setae; cuticle lightly coriaceous. Fovea very short, deep.

**Eyes.** PLE on low mounds.

**Chelicerae.** Small, coniform with short triangular fang about twice as long as width of base; lobe anterior to fang with ca. 8 long curved black setae.

**Maxillae.** Roughly coniform, tapering ectally from base to tip which has dense bush of black hair; covered basally and ectally with many short thorn-like and several long bristles; maxillae almost touch in front of labium; shallow crescentic depression entally.

**Labium.** Longer than wide, almost flat, converging from basal notches to narrow rounded tip.

**Sternum.** Widely cordate, with slight intercoxal point, distally rounded; margins slope quickly to flat broad central plateau. Uniform cover of fine and thick black bristles, all posteriorly directed.

**Legs.** For measurements see Table 1. Coxal bases with slightly produced extensions on III, IV. Trochanters convex and without notches. Coxae I

TABLE 1. Leg measurements of *Hetaerica harveyi*, holotype male.

	Leg 1	Leg 2	Leg 3	Leg 4	Palp
Femur	1.38	1.38	1.19	1.69	0.73
Patella	0.69	0.69	0.65	0.81	0.38
Tibia	1.08	0.92	0.73	1.23	0.31
Metatarsus	1.08	0.92	1.12	1.85	
Tarsus	0.85	0.85	1.23	1.23	0.81
Total	5.08	4.76	4.27	6.81	2.23



FIG. 4. Distribution map of *Hetaerica scenica* (Koch).

with uniform retroface. Leg cuticle smooth, shiny, without hair, only bristles and spines. Distoventral metatarsi III, IV with denser cluster of black bristles and preening combs of 4-6 bristles retrolaterally. Long erect bristles on tibia (2-3) and metatarsi (1), I, II.

**Spines.** I: fe p1d1, pa0, ti v.1.2.2w, me v.2.1.2.2.3, ta pv4rv6. II: fe p1d1, pa0, ti v.1.1.1w, me v2.2.2, ta pv5, rv4. III: fe p2d3r1, pa p1r1, ti p2d1r2v2.2.2; me p1.1.2d2r1.1.2v2.2.2, ta pv6rv6. IV: fe p1d2r1, pa p1r1, ti p2d2r2v2.2.2, me p1.1.2d2r1.1.2v1.1.1.1.3, ta p1 pv7rv7. Palp: fe d2, pa p1, ti p1v2w, ta p3v9.

**Claws.** Palpal claw directed diagonally across longitudinal plane, centrally dentate. Tarsus tapers to tip; c. 6-8 long teeth in slightly curved line down claw; paired claws long, curved with ca. 10 teeth in narrowly sinuous row; third claw distinct, edentate.

**Trichobothria.** Several short and 2-3 long trichae in two basal rows on tibiae; 2-3 long distally in irregular line on metatarsi; 5 on tarsi in straight line and lengthening distally.

**Spinnerets.** ALS long, cylindrical with domed apical segment; PMS short, wide; PLS more slender than PMS but slightly longer with apical dome.

**Abdomen.** Spiracle ridge short, roughly triangular hirsute patch = vestigial colulus.

**Epigyne.** Sclerotised zone along each side.

**HABITAT & DISTRIBUTION.** *H. scenica* occurs in open sclerophyll forest, heath and vine thickets in litter for much of eastern Queensland.

**TOXICITY.** Two bites from this species are reported from material listed: one produced only mild pain; the other happened under a tree (dropped) and a 2cm white area surrounded by 5cm red cellulitic area developed.

**REMARKS.** Jocqué (1995) noted the presence of an undescribed species from Lake Broadwater (no registration number given) which Jocqué (pers. comm.) notes subsequently is not congeneric with *Hetaerica* and is not conspecific with males and females he listed from that locality in the material of *Australorena scenica* (QM S15735).

Other material of *H. scenica* differs from that from Pentlands only in that the anterior lateral white bars on the dorsal abdomen are broken in the posterior third; the palps are indifferntiable.

Also, we report here, in males from Pentlands and elsewhere, the presence of a weak dorsal and epigastric scutum and that the conductor is apically rolled; neither were noted by Jocqué (1995).

***Hetaerica harveyi* sp. nov.**  
(Fig. 5)

**ETYMOLOGY.** In honour of Dr Mark Harvey, friend and colleague.

**MATERIAL.** HOLOTYPE: ♂, WA; O'Neill Rd State Forest, site NR02, wet pitfalls 1-5; 35°02'27"S 117°10'17"E, 13 Oct 1997-14 May 1998, Paul van Heurck, CALM-WAM survey, WAM98/1675. PARATYPE: ♂, same data, WAM98/1676.

**DIAGNOSIS.** Differs from *H. scenica* in the triangular fold rather than spine-like process on the tegulum.

**DESCRIPTION.** Holotype male WAM98/1675: Carapace 2.57 long, 1.84 wide. Abdomen 2.23 long, 1.42 wide.

**Colour.** Carapace, chelicerae, sternum and maxillae as for *H. scenica*. Abdomen dark brown dorsally with two pairs of large ovoid white spots anteriorly, subcircular smaller pair centrally and semicircle posteriorly over spinnerets, ventrally with two white biconvex len-shaped spots around small white central spot. Dorsal scute narrow,

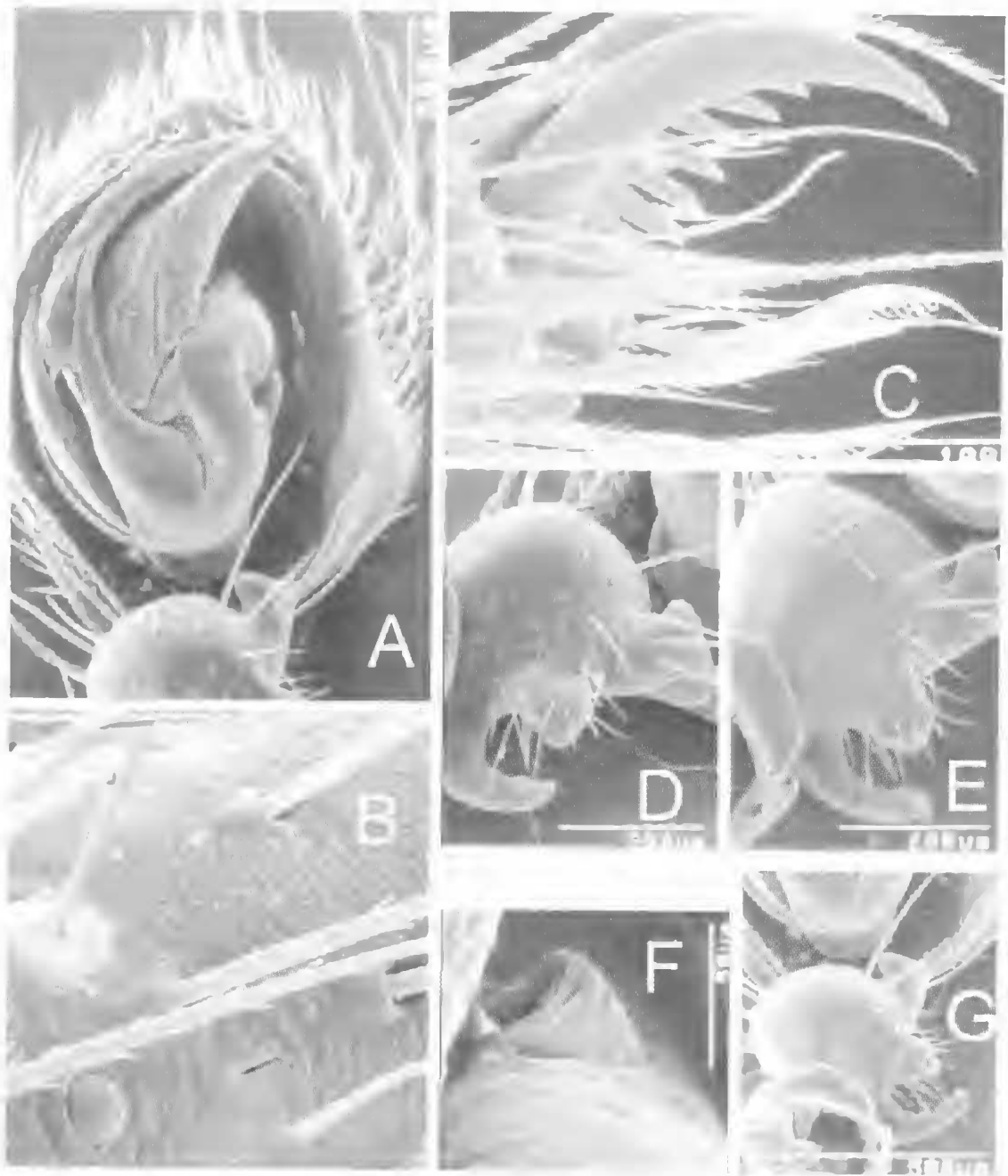


FIG. 5. *Heterica harveyi* sp. nov., holotype male. Pedipalp, tibia, cymbium & bulb, ventral right A, D-G. Scanning electron micrographs. A, ventral view. B, tarsal dorsal view showing trichobothria and other sensory structures. C, claws, lateral view. D, tibial apophysis, retroventral view. E, tibial apophysis, ventral view. F, tegular process, ventral view. G, tibial apophysis, ventral view.

thin but distinct for half length. Abdominal cuticle with iridescent sheen. Separate genital scute distinct. Legs dark brown with sheen, coxae and metatarsi and tarsi lighter. Spinnerets brown.

*Eyes.* AME:ALE:PME:PLE, 4:7:6:6.

*Spines.* I, II: fe-ti, 0; me I, v1.2.2.3, some are short blunt thorns but not consistent on left and right leg. II: tibiae with midventral line of 3 long curved spines; me v1.2.3. Tarsi I, II with no more than thick bristles. III: fe p1d3r1; pa plr1; ti p1d1r1v1.2.3; me p3d1r3v2.1.3; ta v2.2.2.2.2. IV: fe d2r1; pa plr1; ti p2d1r2v2.2.0; me p3d2r3v1.1.1.1.2.3; ta v2.2.2.2.2.

*Palp.* As for *H. scenica* but with spine-like process adjacent to the embolus tip.

*Spinnerets.* PLS are short (ca. 0.5 of ALS length) cylinders with noticeable gap to smaller PMS. PLS & PMS almost in line; colulus only a hirsute area of cuticle. Tracheal spiracle indistinct.

Female unknown.

**DISTRIBUTION.** Known only from southwestern Western Australia.

#### ACKNOWLEDGEMENTS

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